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Radial Pivot Fastener

F. Radial Pivot Fastener

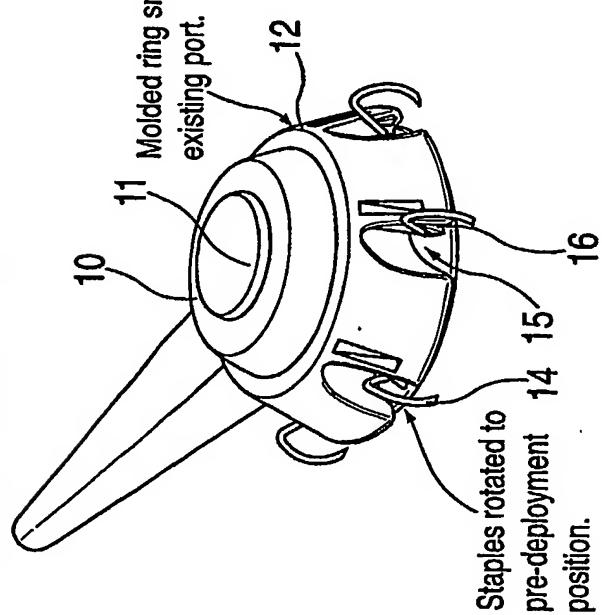


FIG. 1

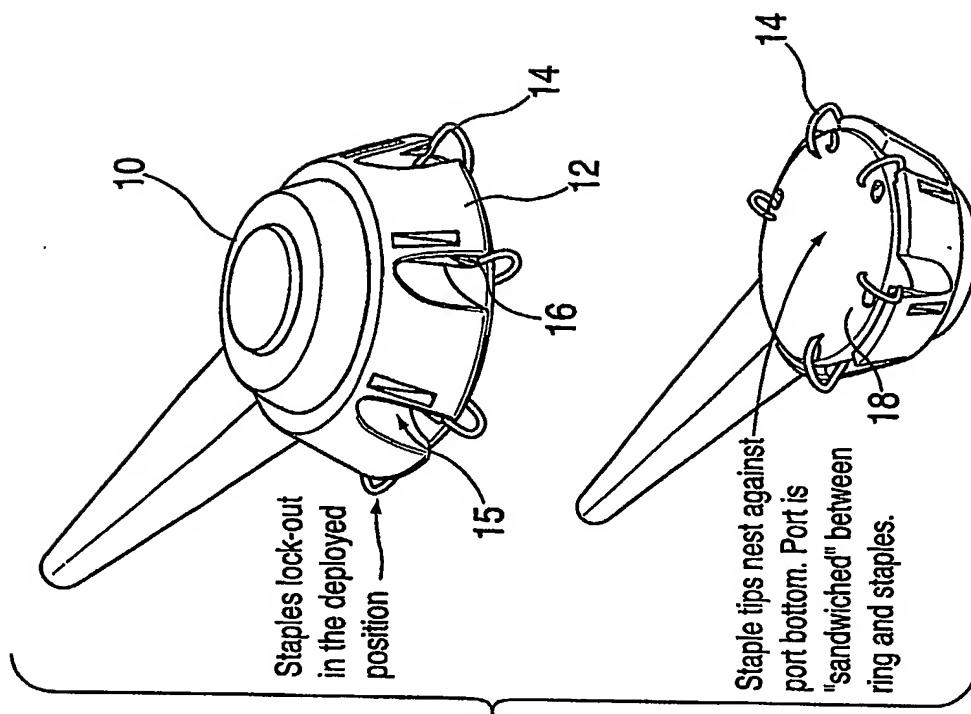


FIG. 2

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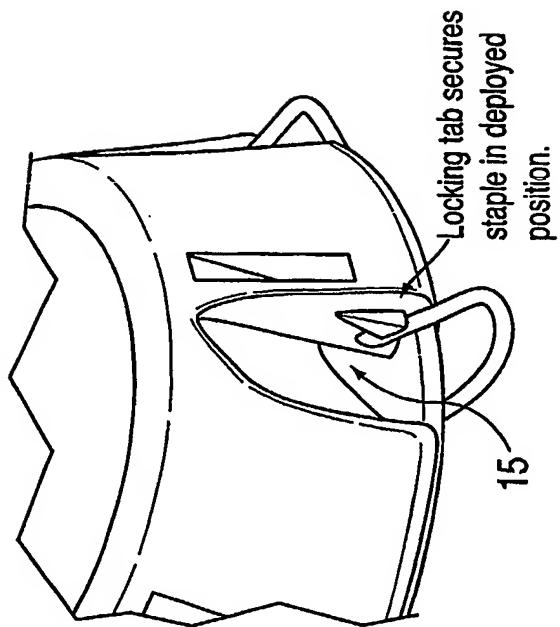


FIG. 4

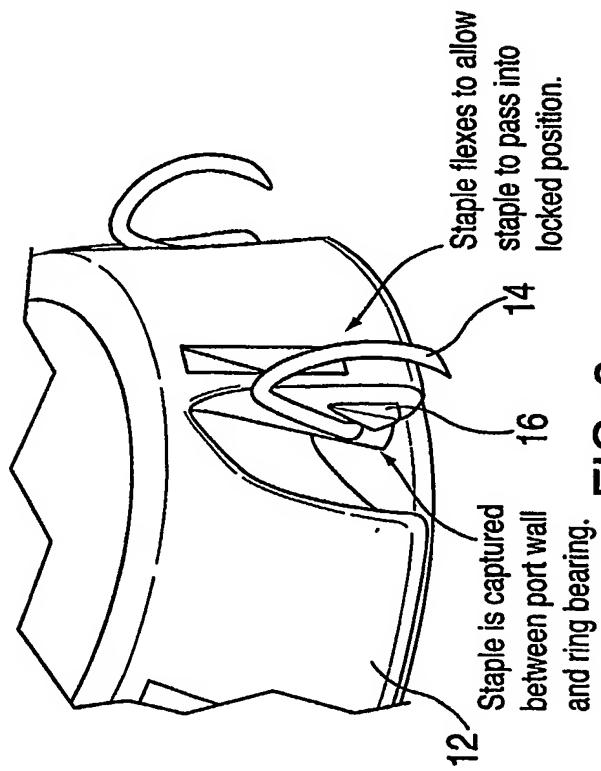
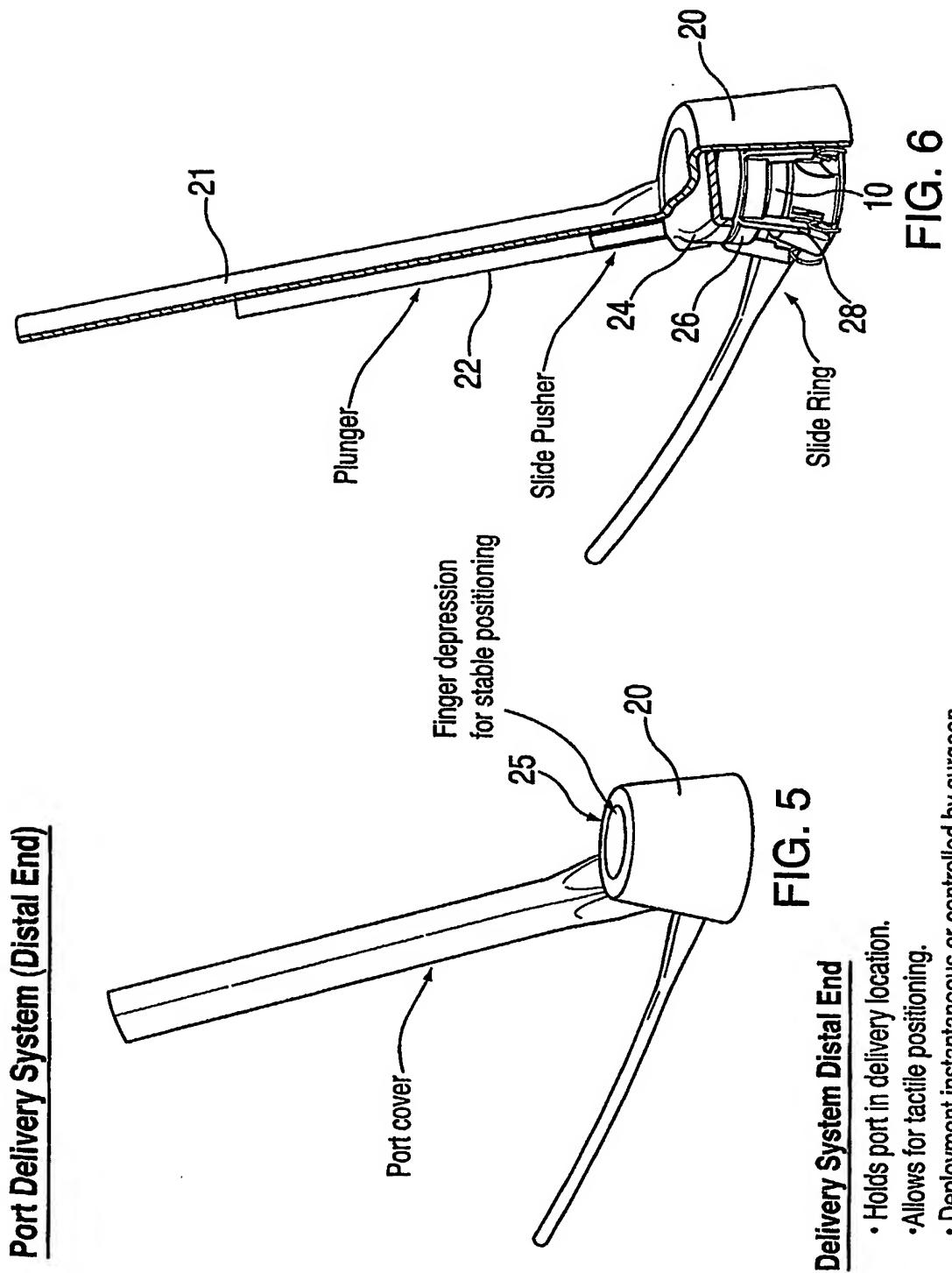
Radial Pivot Fastener (detail)

FIG. 3

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Port Delivery System (Distal End)

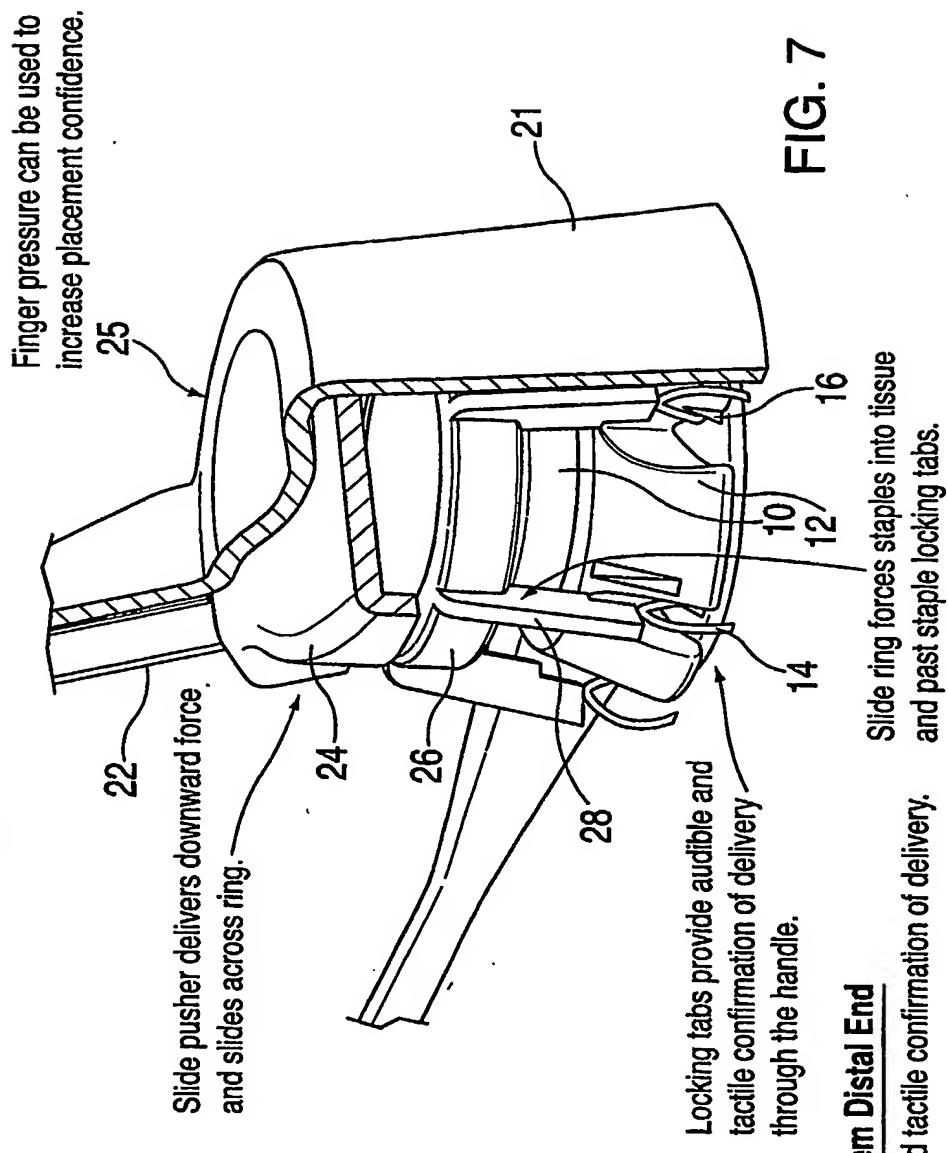
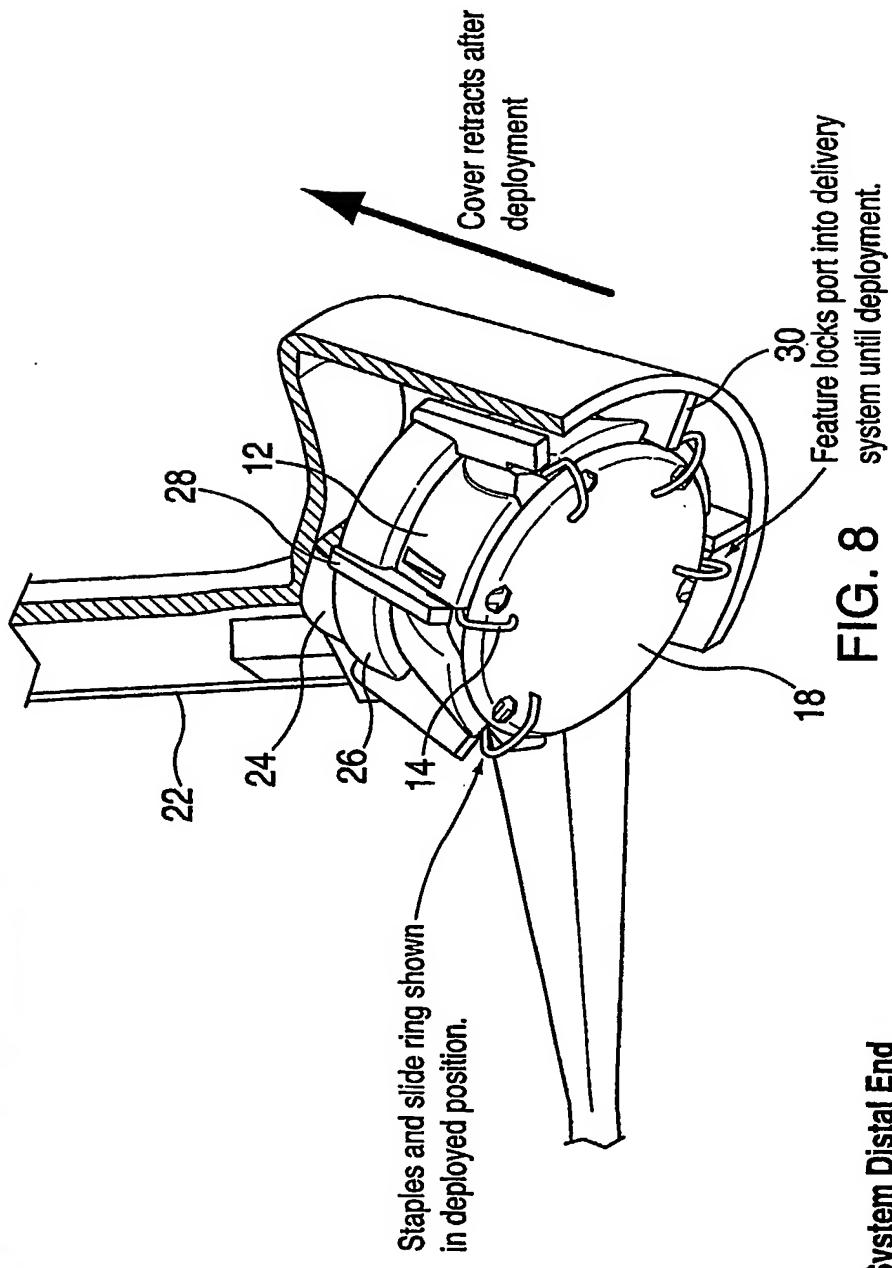


FIG. 7

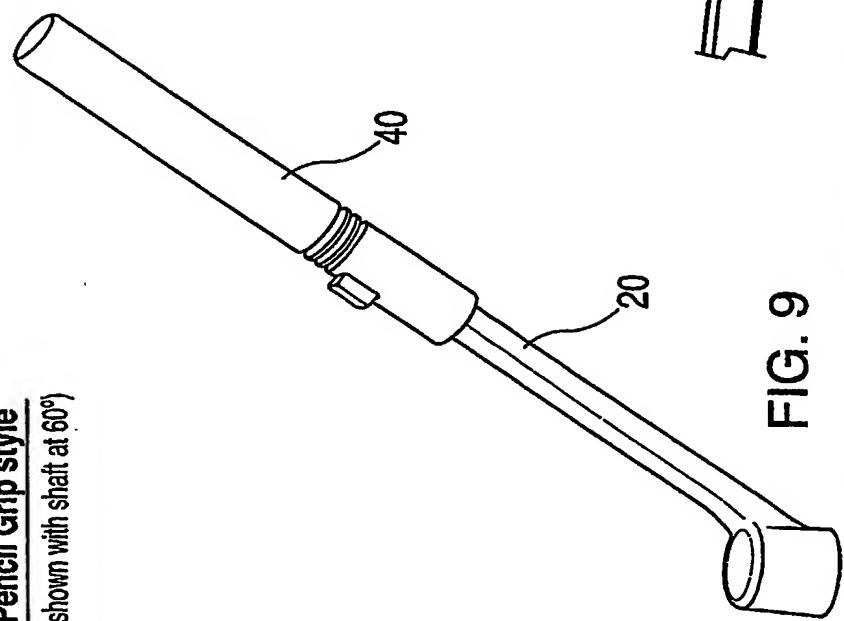
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Port Delivery System (Distal End)



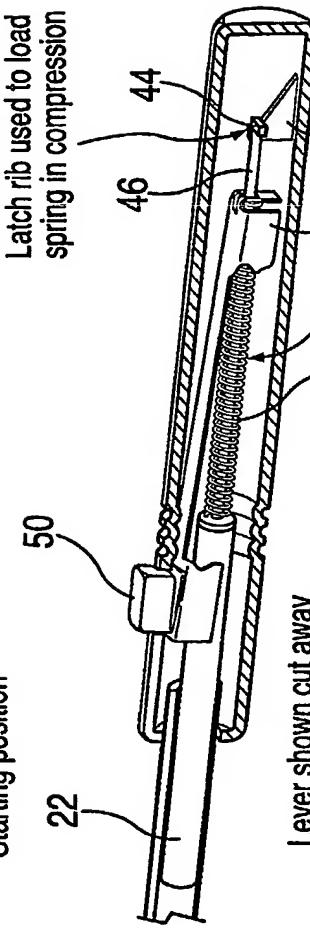
Port Delivery System (handle configurations)**Pencil Grip style**

(shown with shaft at 60°)



Starting position

50

Latch rib used to load
spring in compression

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FIG. 10

Lever shown cut away

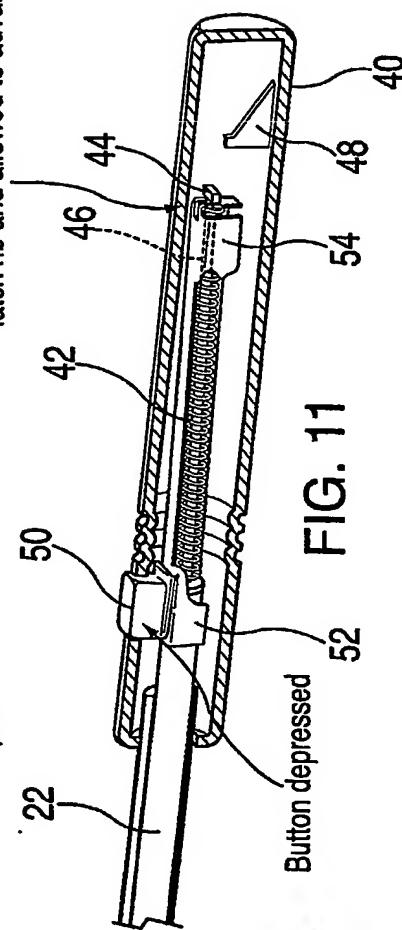
Upon rotation, rod dislodged from
latch rib and allowed to advance

FIG. 11

Button depressed

Simple Button/Trigger Release mechanism• Produces ~0.250 - 0.750" rod travel
(depends on force requirement)

• Deployment instantaneous, high impact speed

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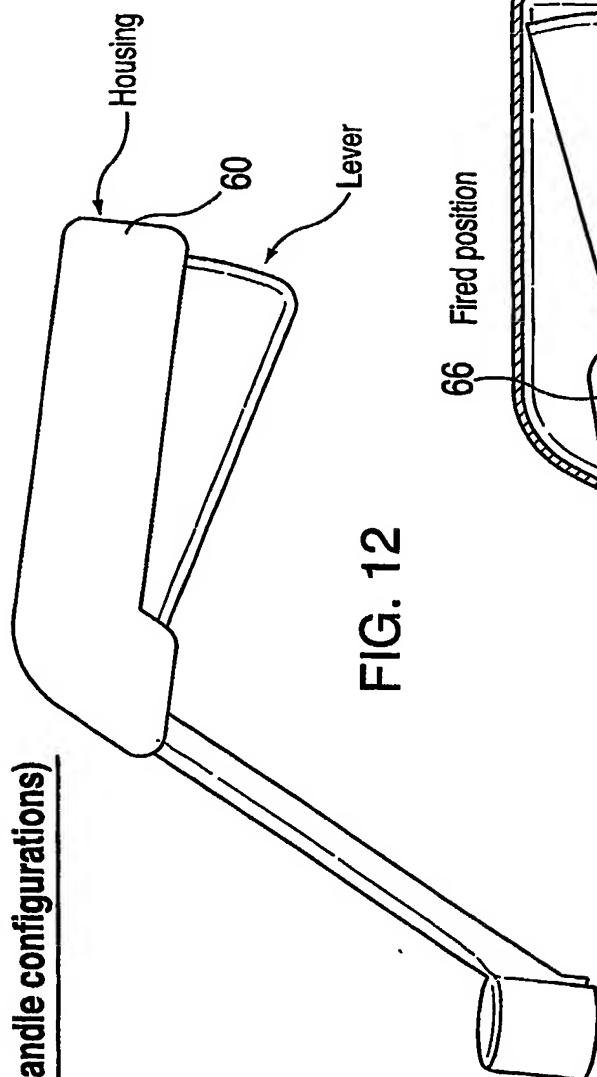


FIG. 12

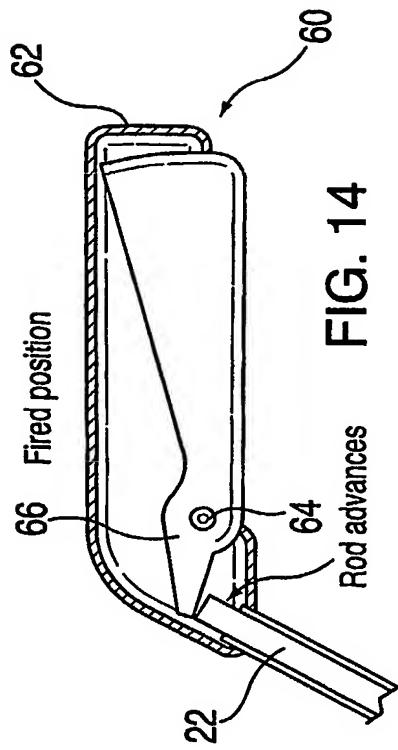


FIG. 14

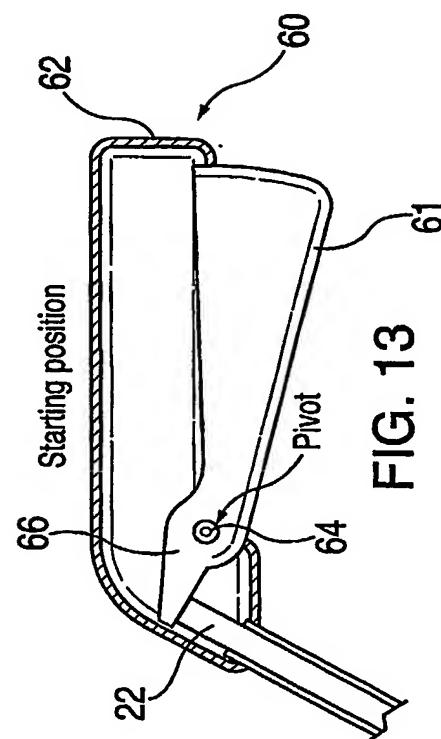


FIG. 13

Lever mechanism

- Produces ~0.250" rod travel
- Can produce in excess of 50lb. force on rod (depends on force requirement)
- Deployment speed controlled by operator

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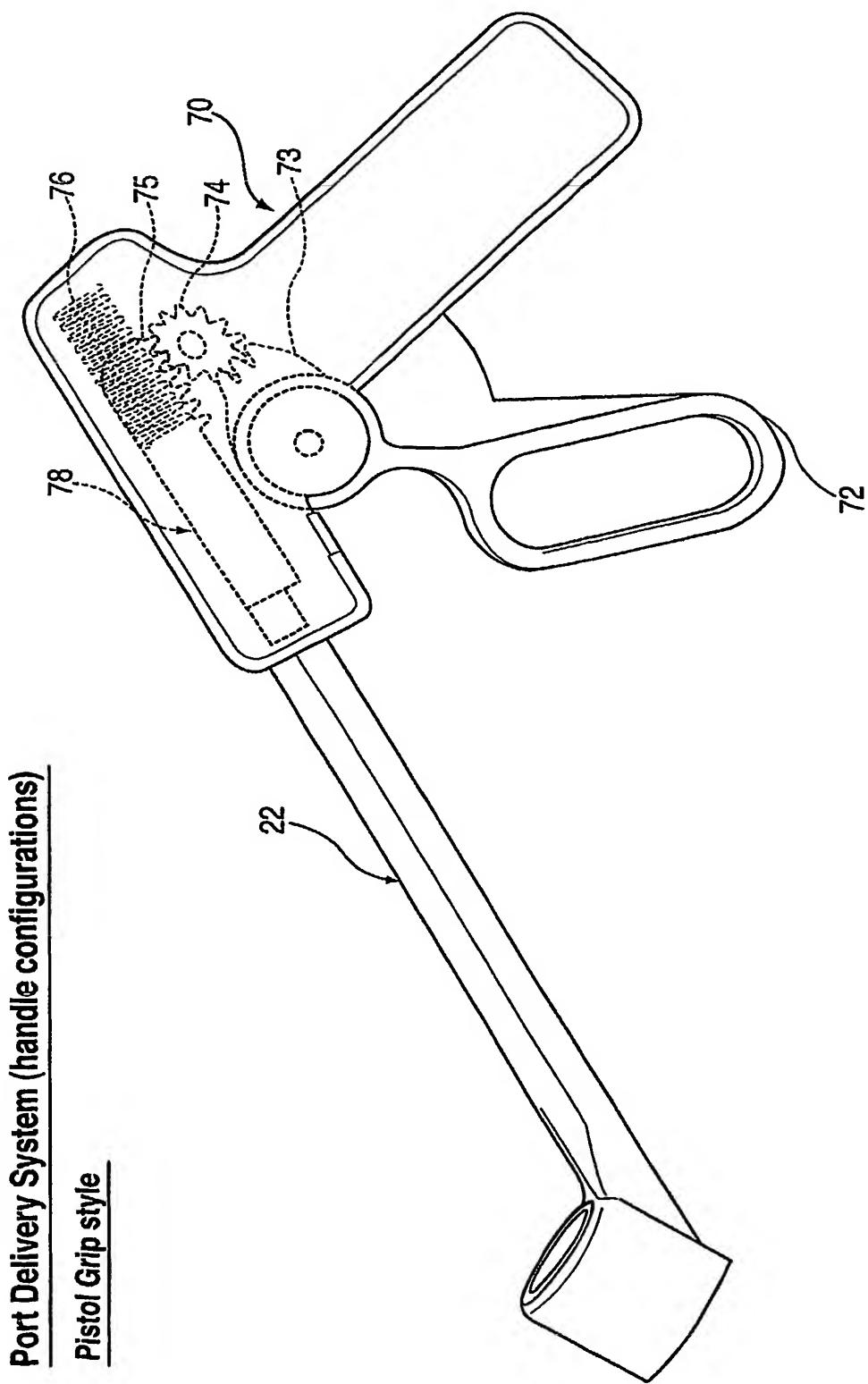


FIG. 15

Port Delivery System (handle configurations)
Pistol Grip style

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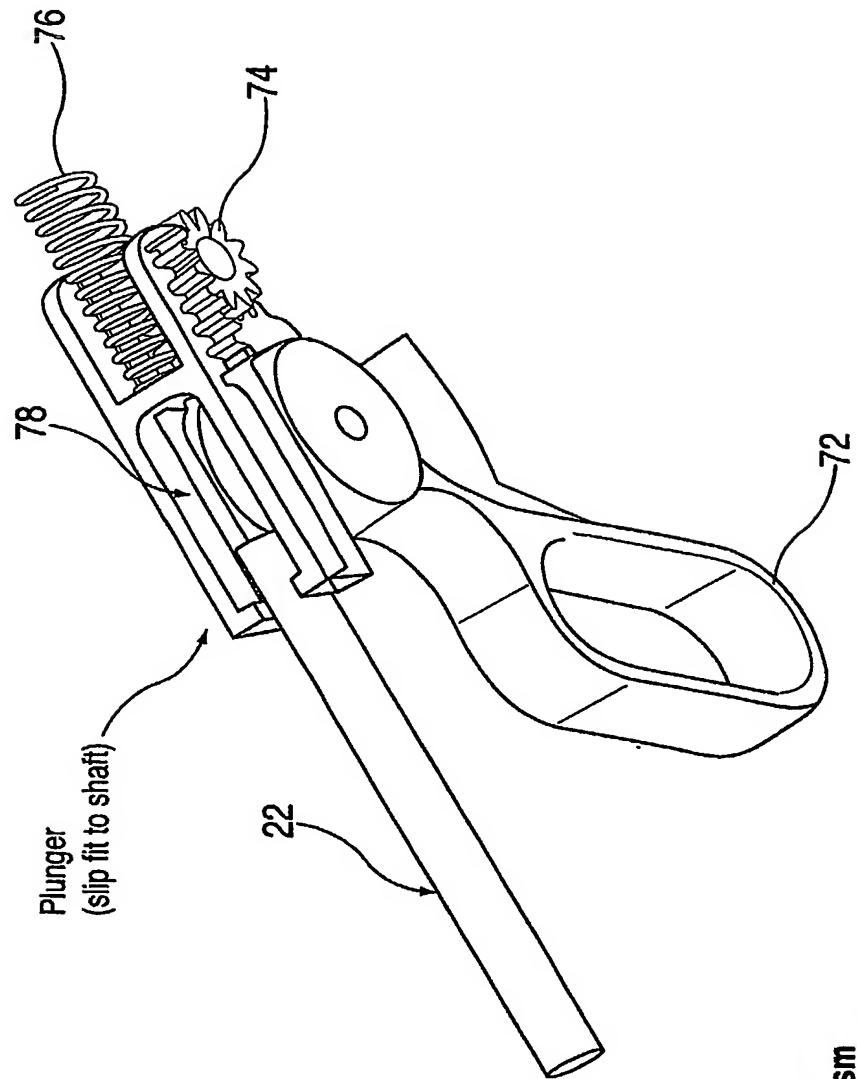


FIG. 16

Gear train mechanism

- Produces ~0.400" rod travel
- Can produce ~50lb. force on rod
- Deployment instantaneous, very high impact speed

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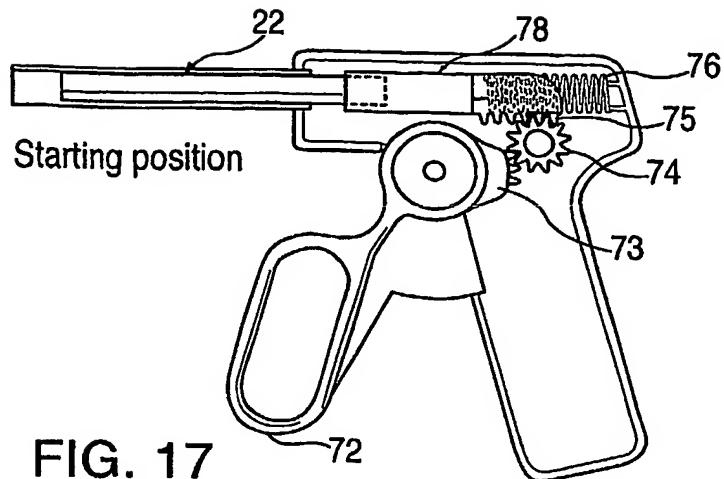


FIG. 17

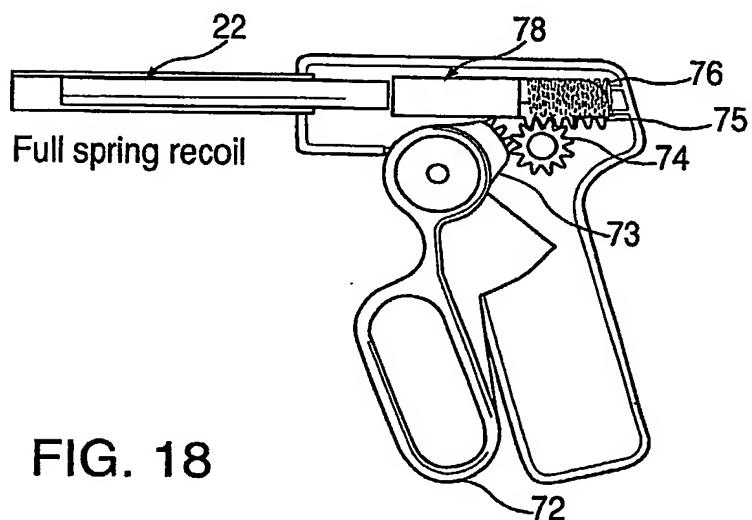


FIG. 18

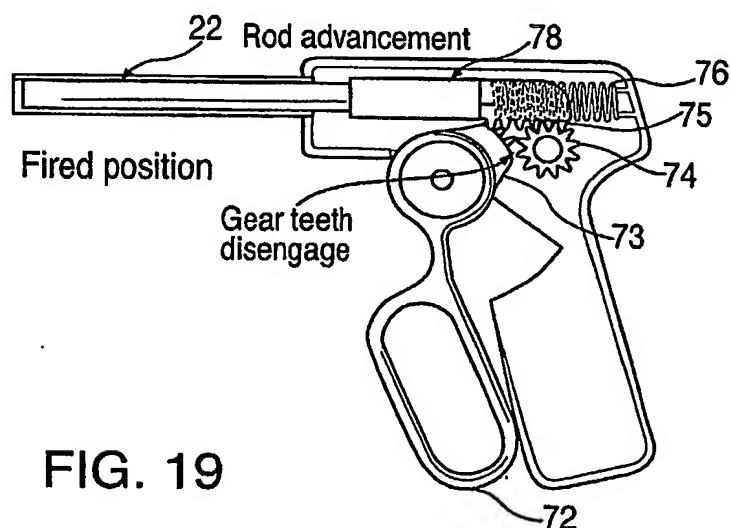
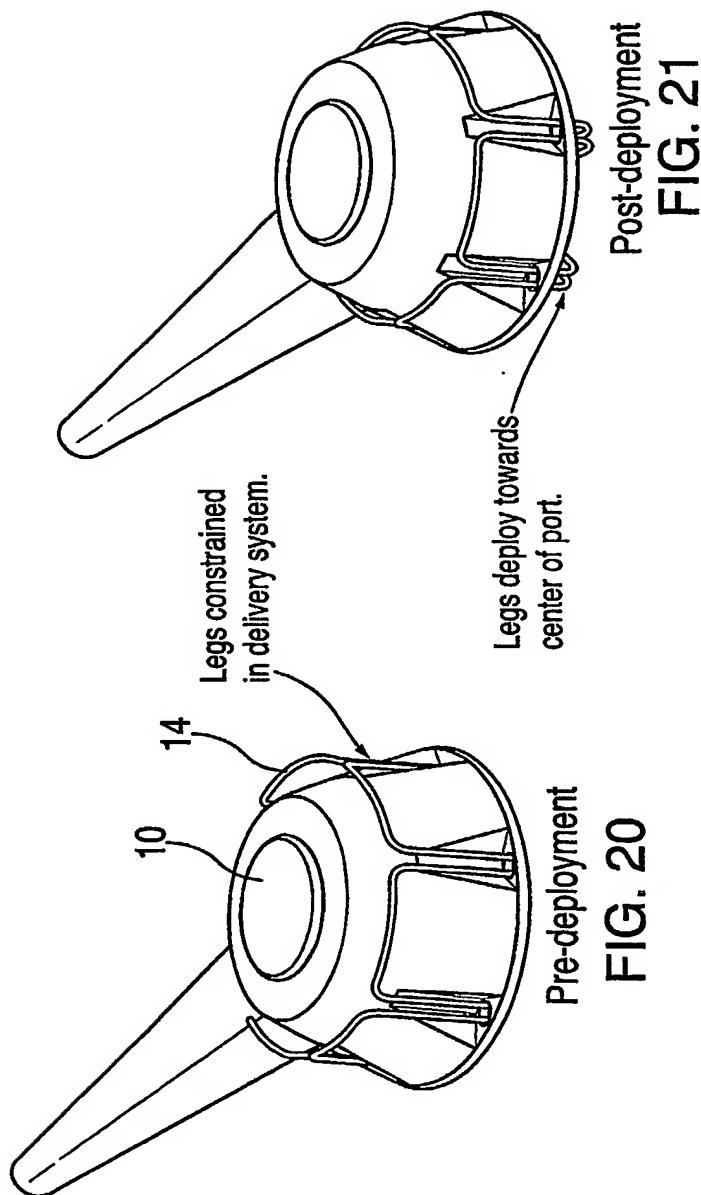


FIG. 19

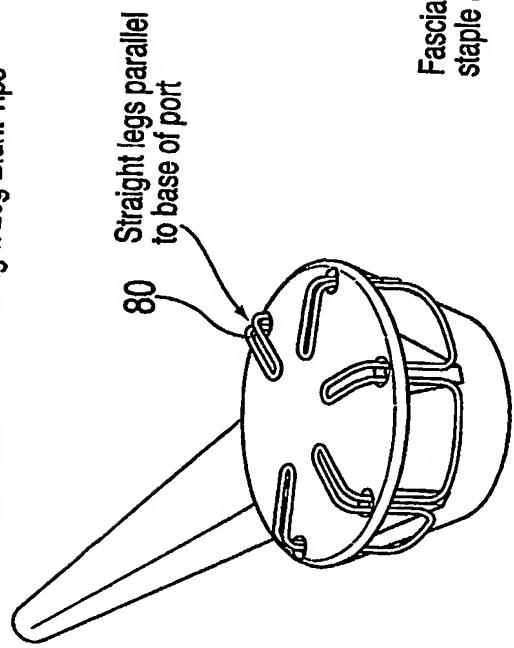
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Continuous NiTi Wire Form

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Continuous Wire Form Possible fastener leg configurations

A1. Continuous Wire Form: Straight Leg Blunt Tips



A2. Continuous Wire Form: Curved Leg, Blunt Tips

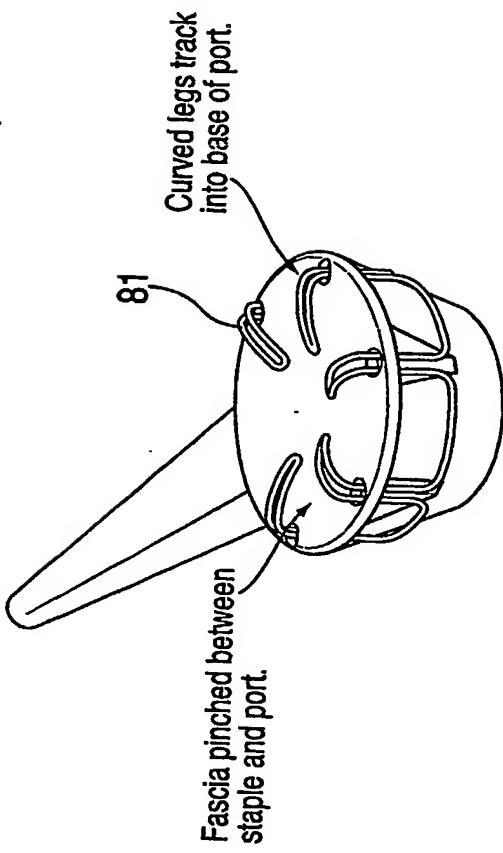


FIG. 22

FIG. 23

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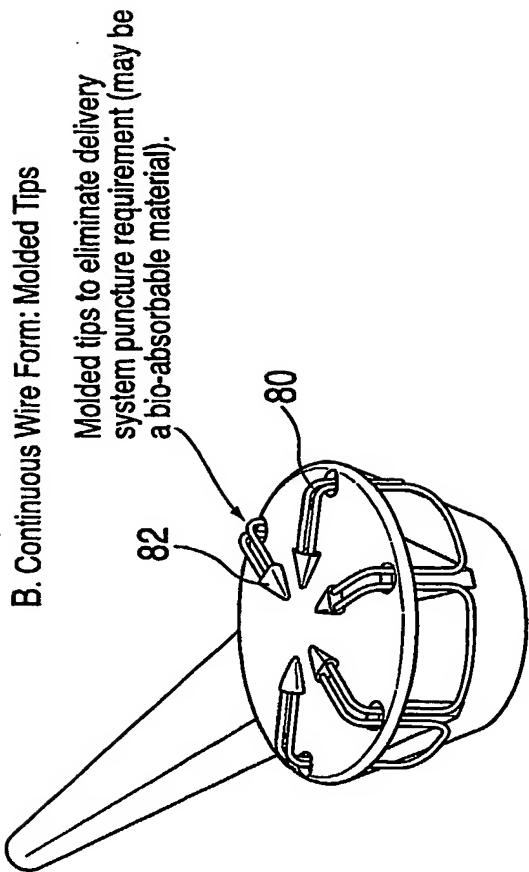
Continuous Wire Form Possible fastener leg configurations.

FIG. 24

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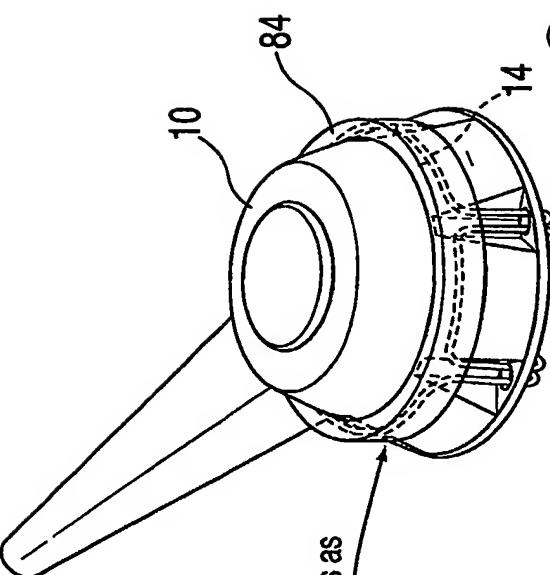


FIG. 26

Insert-molded ring
required to keep
individual segments as
one part.

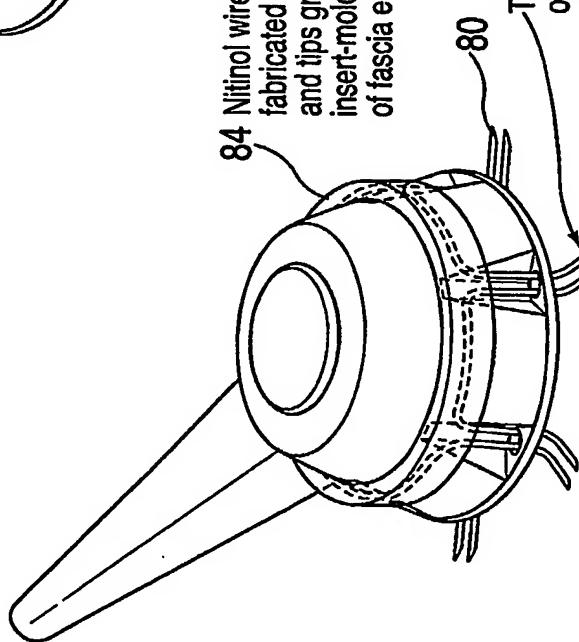


FIG. 25

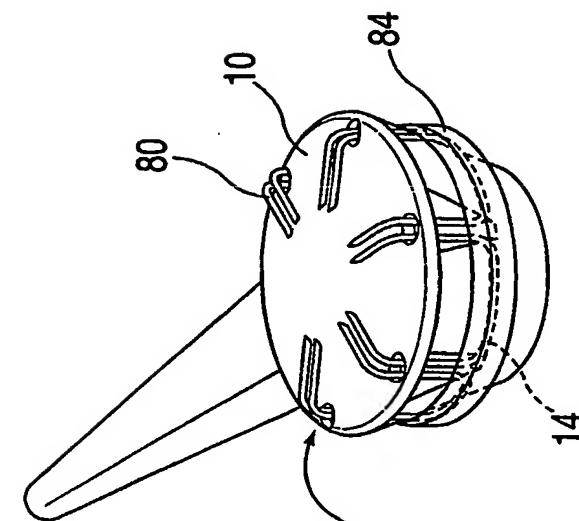
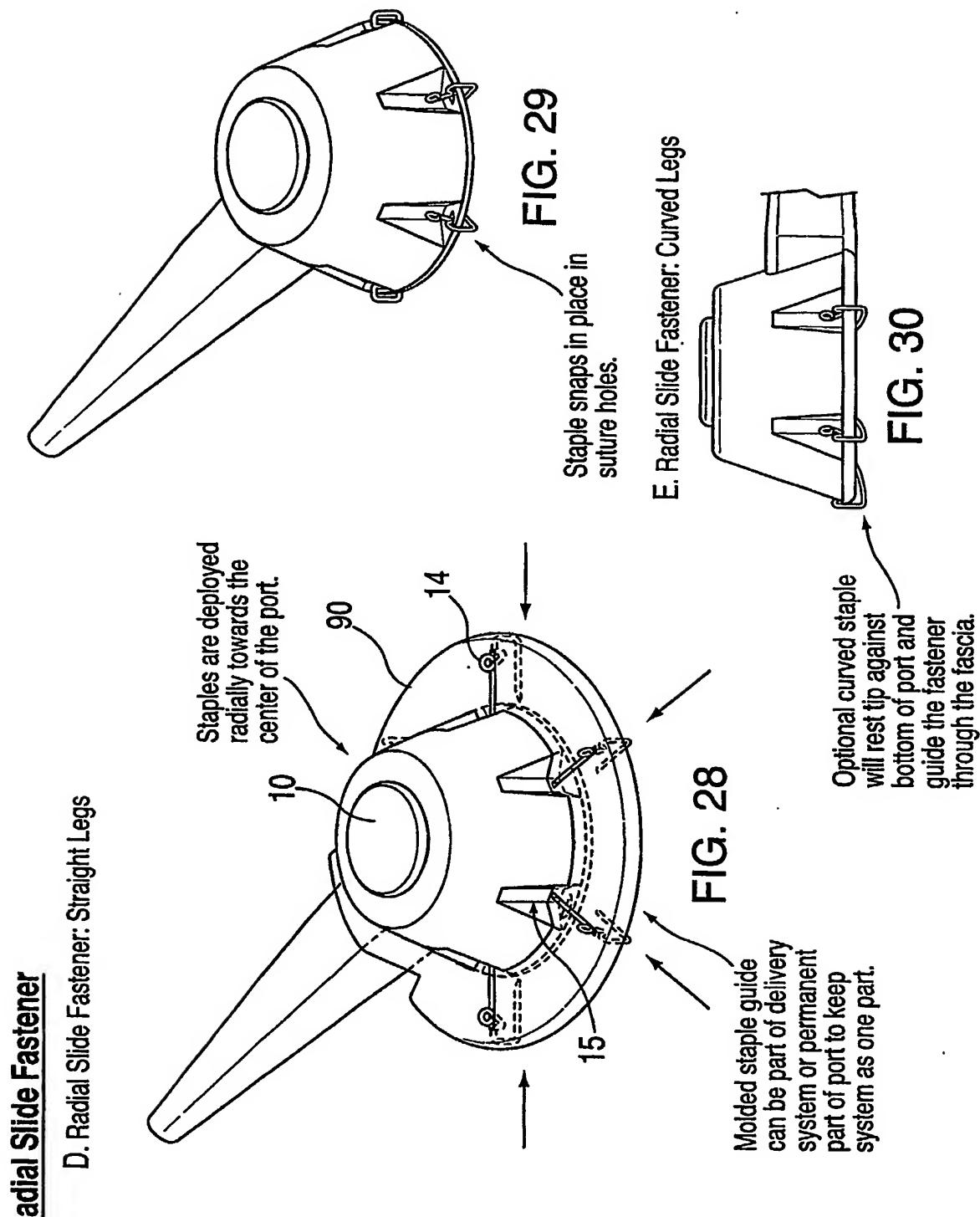


FIG. 27

Continuous Wire Form Modified

C. Continuous Wire Form: Ground Tips

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Two Part Fastening System: Concept 2

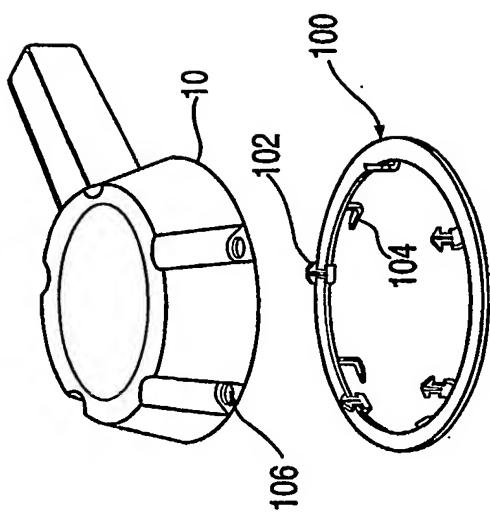


FIG. 31
Pre-Installation

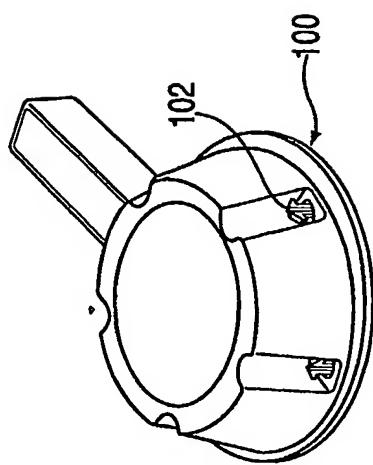


FIG. 32
Post-Installation

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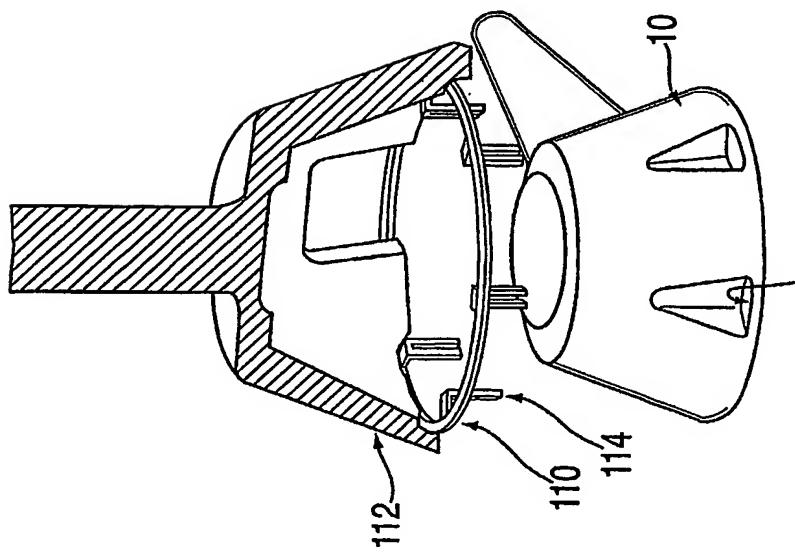
Two Part Fastening System: Concept 1

FIG. 33
Pre-Installation

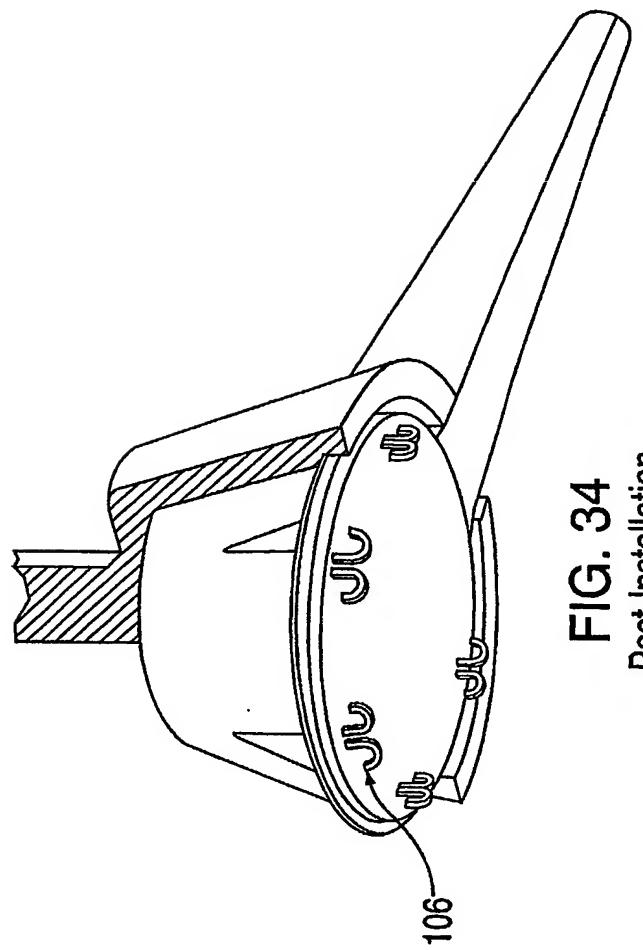
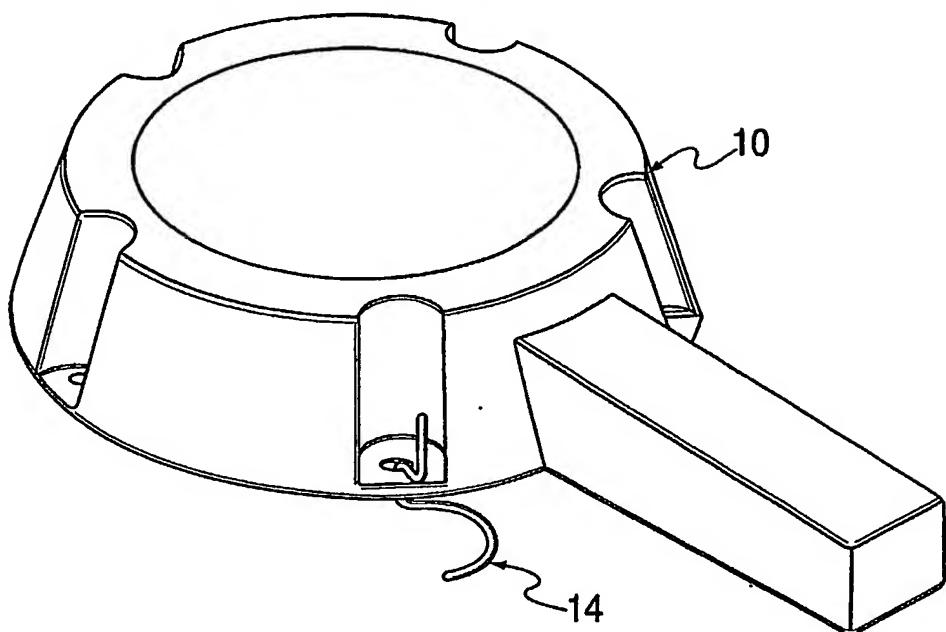


FIG. 34
Post-Installation

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Stand Alone Fastener: Concept 1**FIG. 35**

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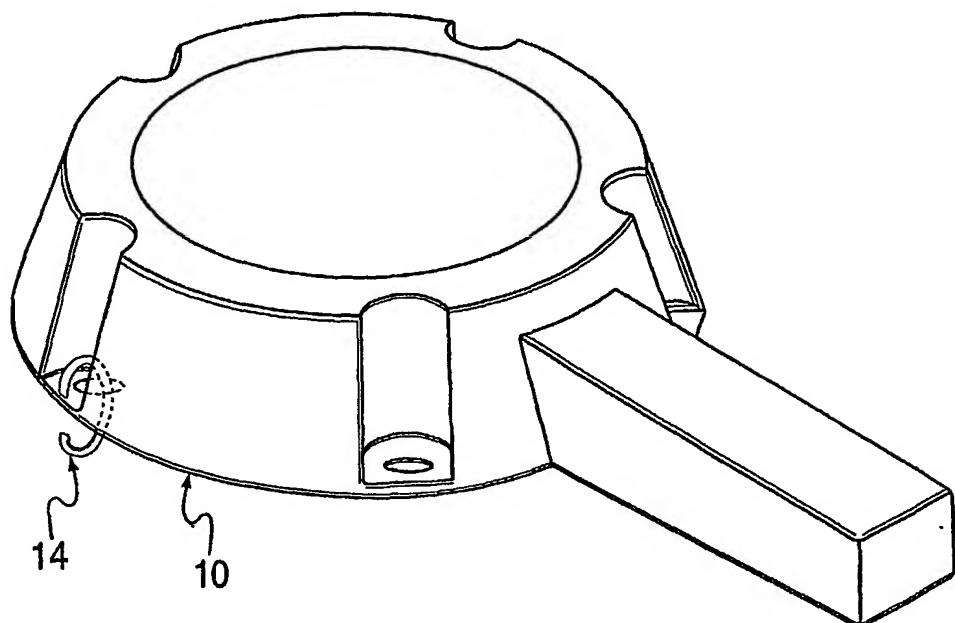
Stand Alone Fastener: Concept 2

FIG. 36

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Stand Alone Fastener: Concept 3

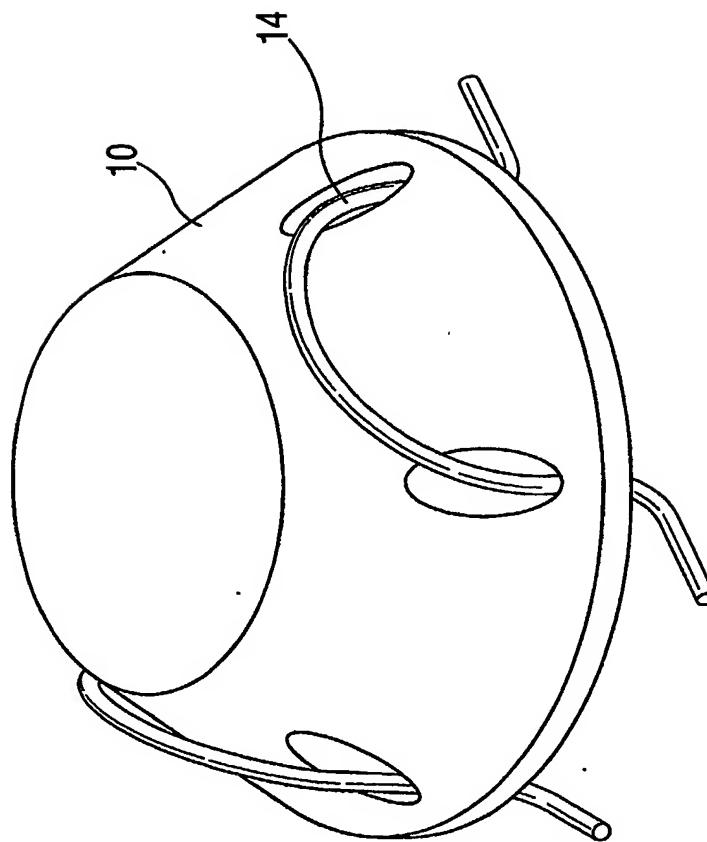


FIG. 37

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Stand Alone Fastener: Concept 4

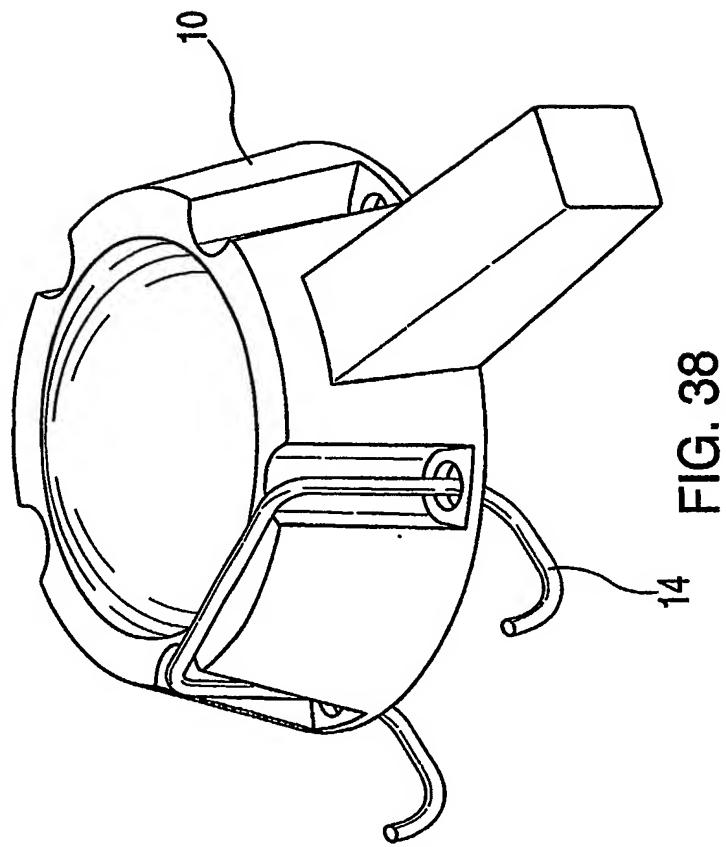


FIG. 38

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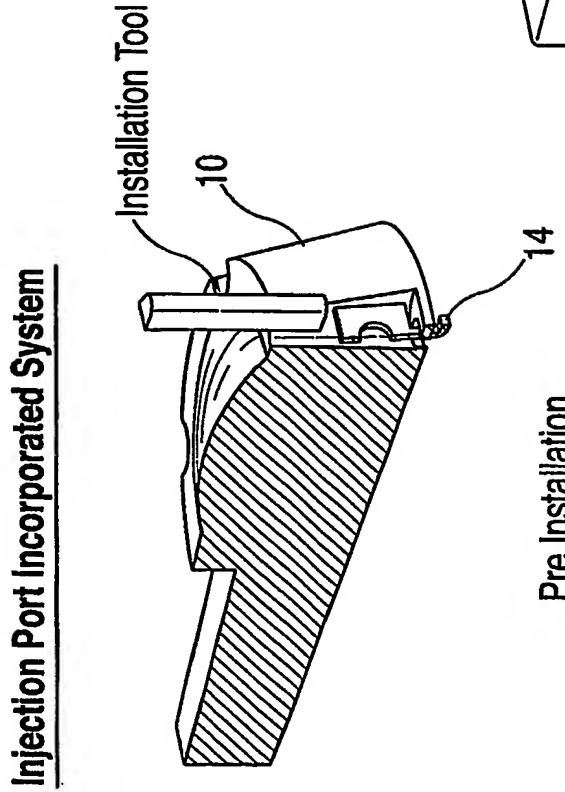


FIG. 39

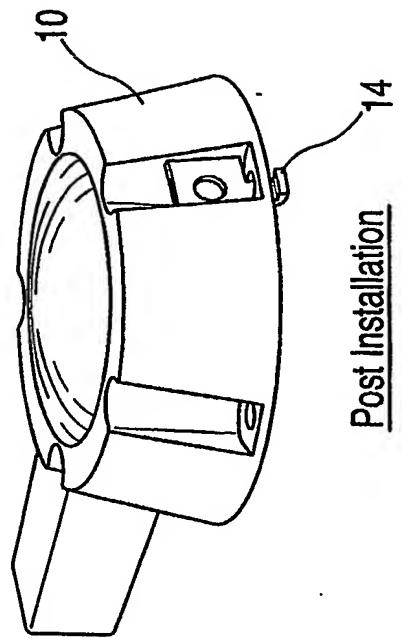


FIG. 40

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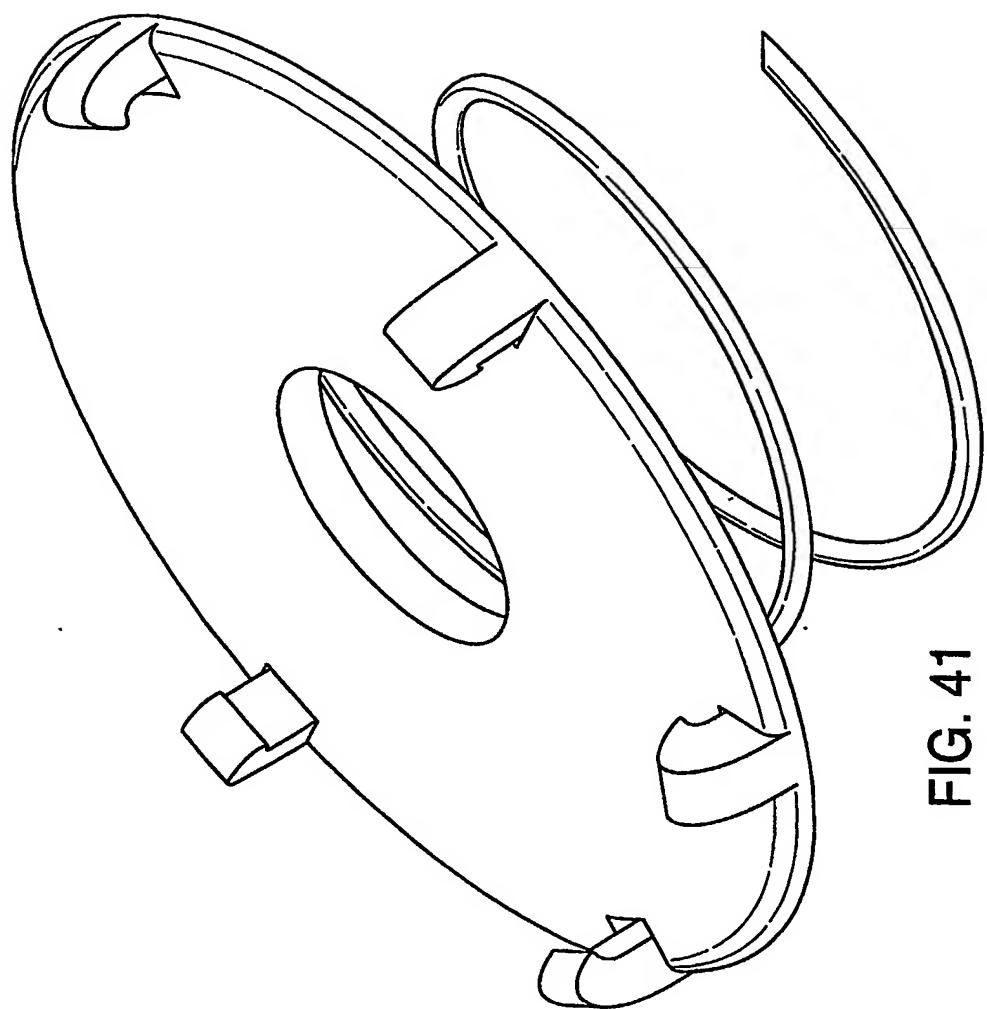


FIG. 41

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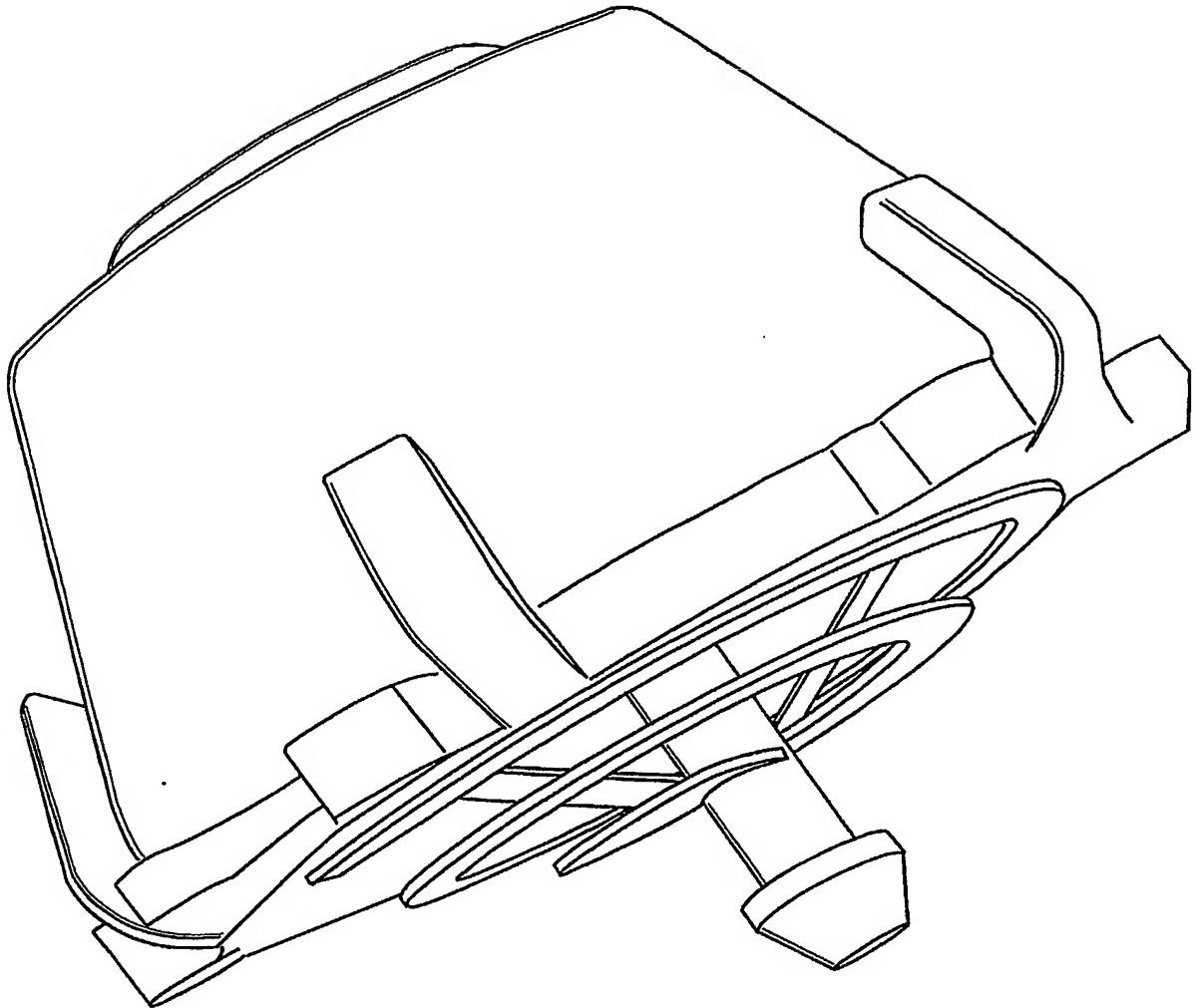


FIG. 42

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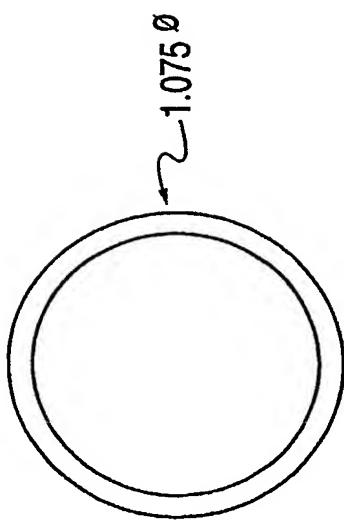


FIG. 43

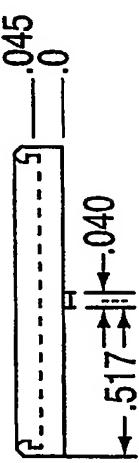
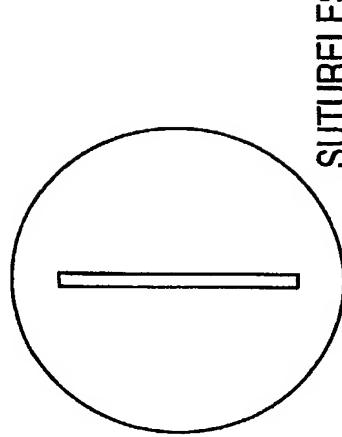


FIG. 44



SUTURELESS PORT

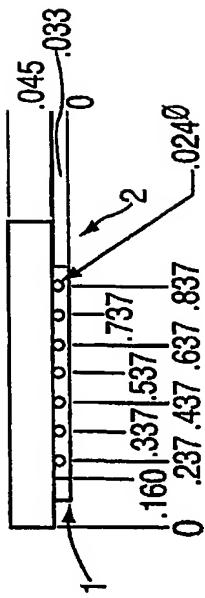


FIG. 46

.100 PITCH
.014 WIRE

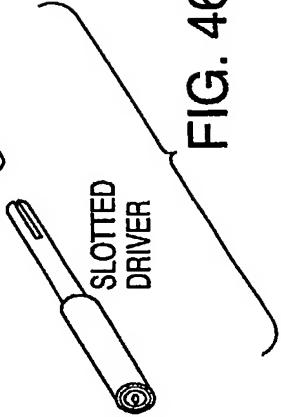
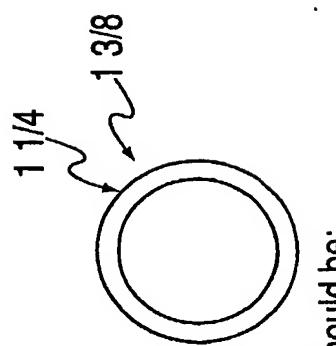


FIG. 47

NOTES:

1. Should have solid stop.
2. Could have latch by having driver end of spring catch on underside of base.

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hole at either end of slot

Note:
use .201⁰ mandrel for
curved hooks

FIG. 48

FIG. 51
Hooks (curved needles)

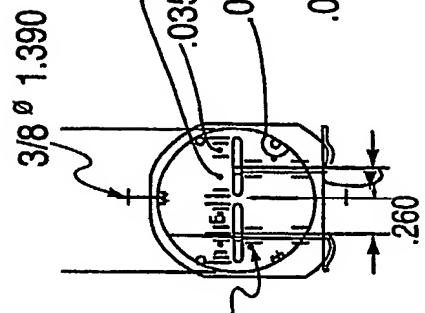


FIG. 49

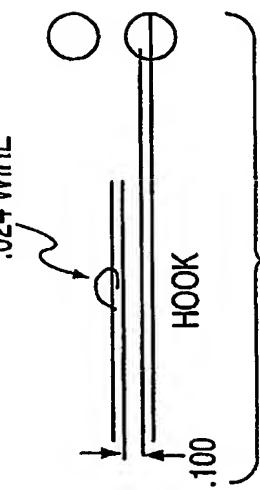


FIG. 52

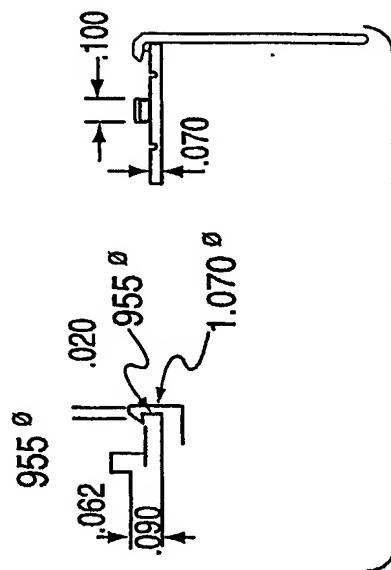
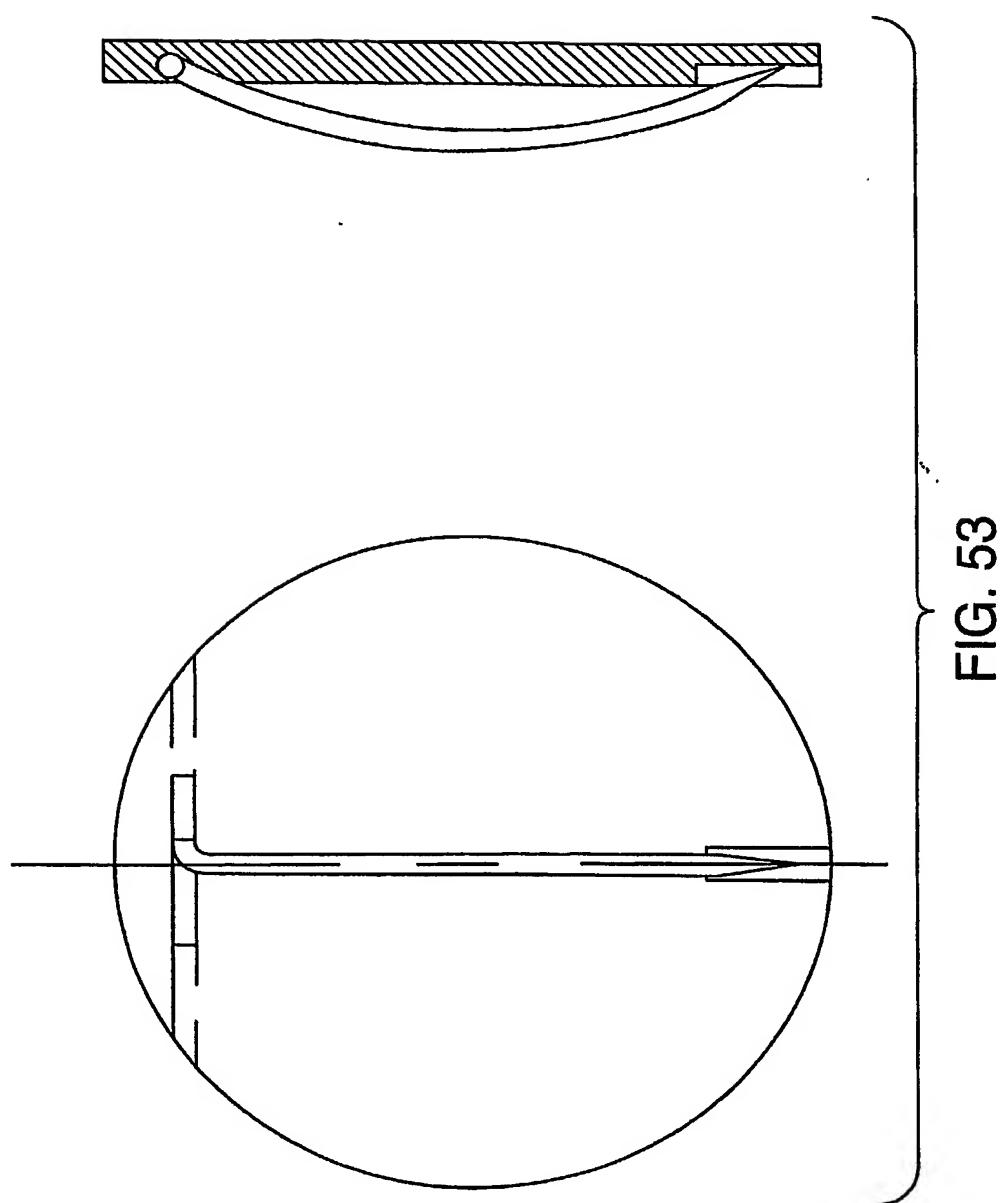


FIG. 50

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PORT FIXATION PROTO #7



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PORT FIXATION PROTO # 8

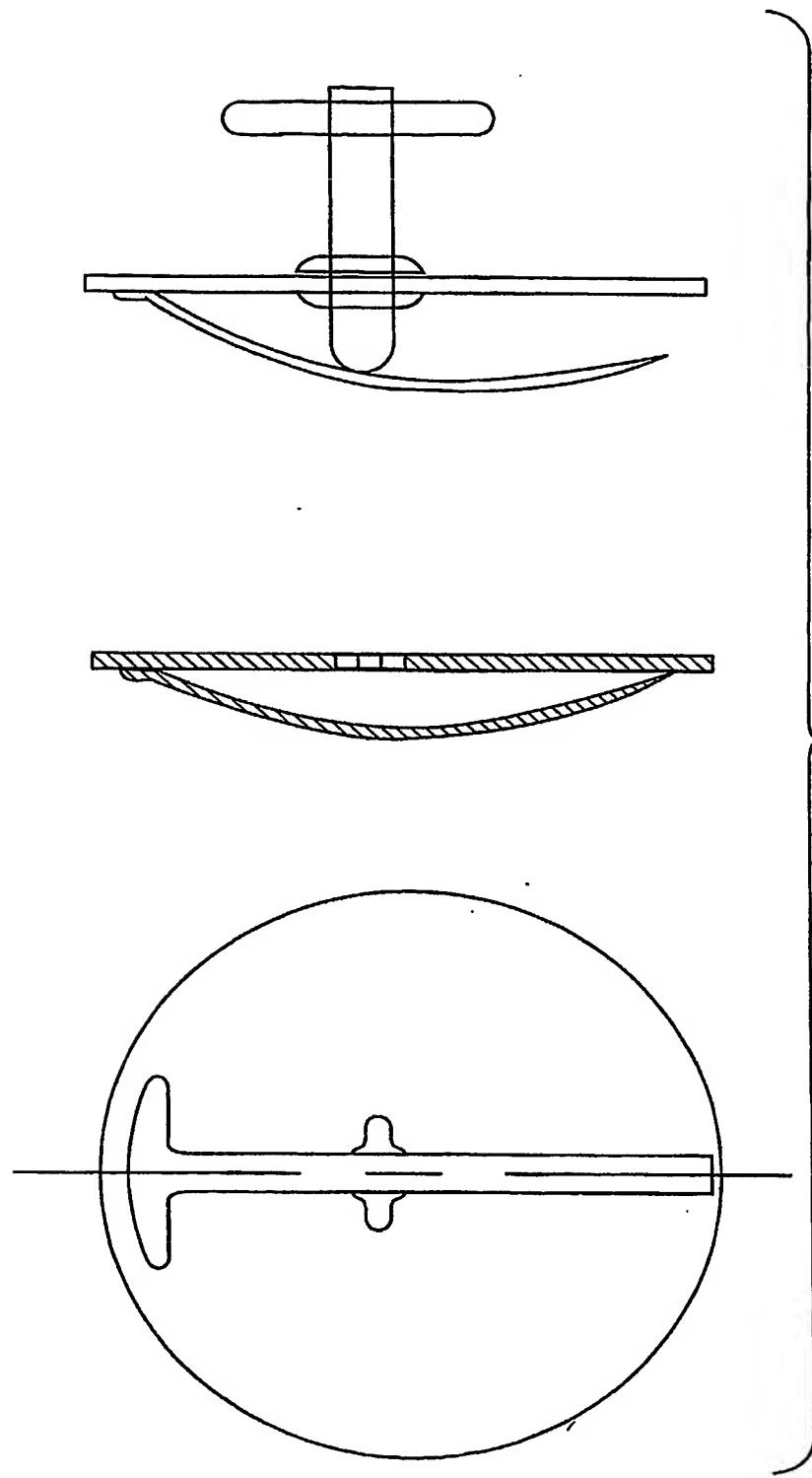


FIG. 54

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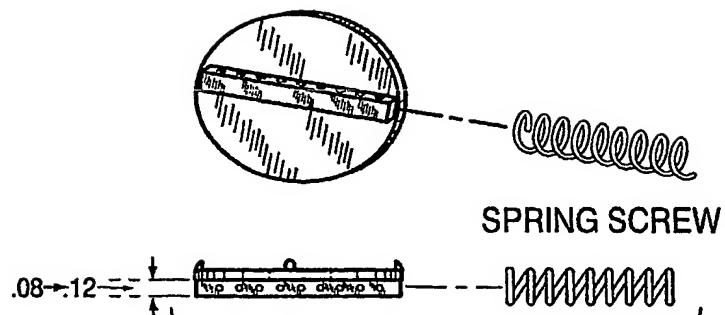


FIG. 55

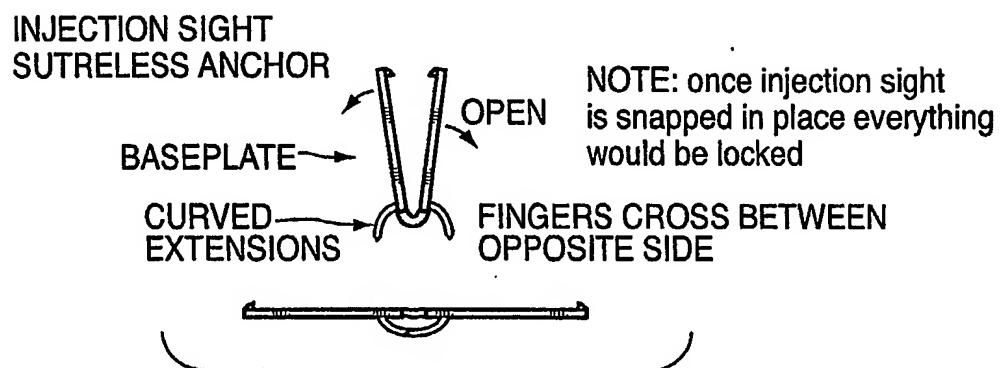


FIG. 56

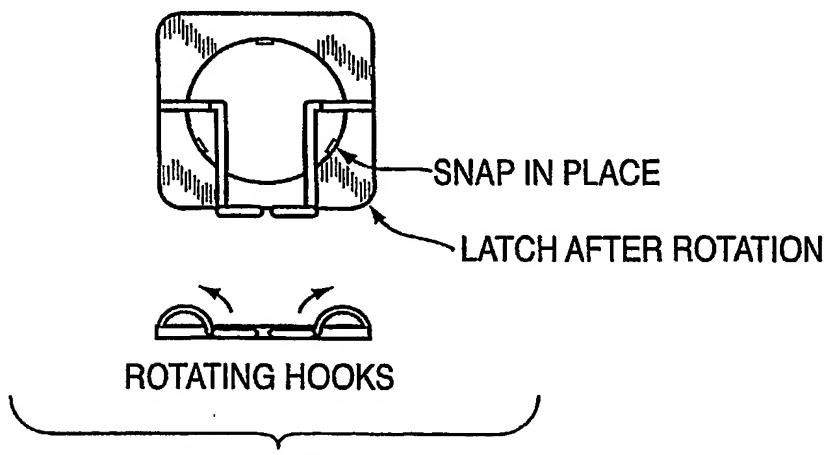


FIG. 57

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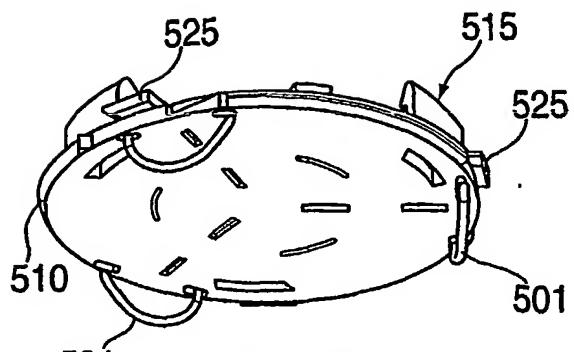


FIG. 59

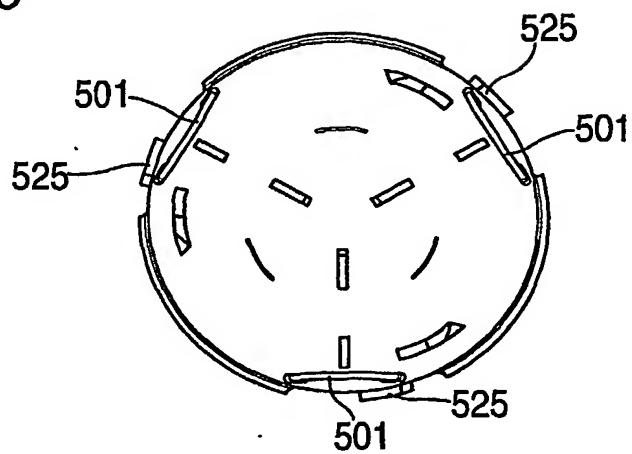


FIG. 60

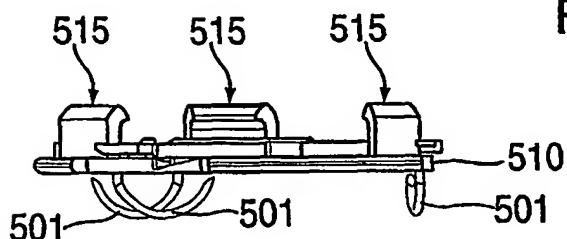


FIG. 61

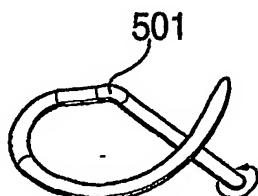


FIG. 62

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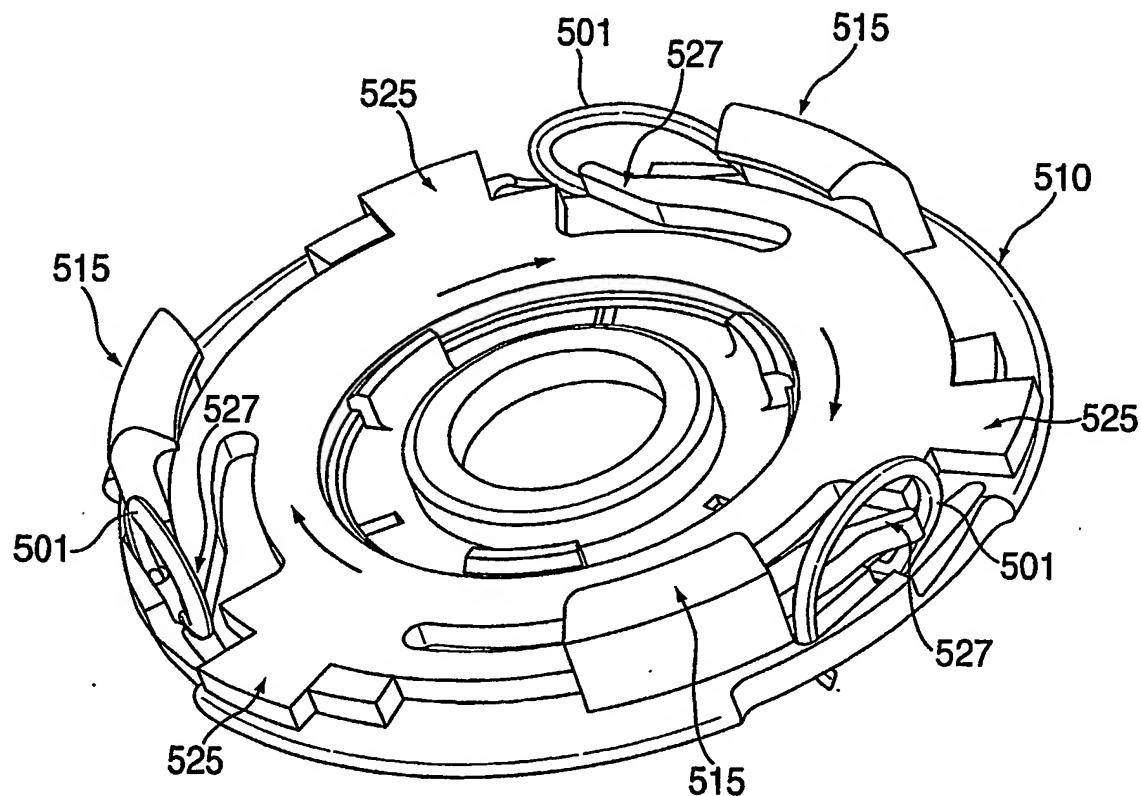


FIG. 58

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